BUILDING A 600-SHIP NAVY: COSTS, TIMING, AND ALTERNATIVE APPROACHES

The Congress of the United States
Congressional Budget Office

NOTE

Unless otherwise noted, all cost figures in this report are in fiscal year 1983 dollars.

PREFACE

As the Congress considers the defense budget for fiscal year 1983, one of the more important issues will be the Navy's shipbuilding program. The Administration has announced plans to increase U.S. naval forces in the interest of assuring maritime superiority over any likely enemy. A key aspect of this is a shipbuilding program that will modernize and increase the size of the U.S. fleet. This shipbuilding program will add substantially to costs, both in fiscal year 1983 and in the future.

This report, prepared at the request of the House Committee on Armed Services, examines the budget and schedule implications of shipbuilding programs that would achieve the Navy's force objectives. The report also examines possible alternatives to the Navy's program. (Two forthcoming companion reports consider implications of the buildup for aircraft procurement and manpower.) In accordance with CBO's mandate to provide objective and nonpartisan analysis, the report offers no recommendations.

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CONTENTS

		Page
Preface		iii
SUMMARY		xi
CHAPTER I.	INTRODUCTION	1
CHAPTER II.	RATIONALE FOR THE 600-SHIP NAVY	3
	U.S. vs. the Soviet Union at Sea	3
	The U.S. Navy Today: Higher Commitments--Smaller Fleet.	4
	The Future Navy--the Navy's Plan	6
	The Future Navy--What is Needed?	17
CHAPTER III.	BUILDING THE FUTURE NAVY--ALTERNATIVE APPROACHES	19
	Overview of Options for Naval Shipbuilding Programs	20
	Option I: Rapid Buildup to Navy Force Objectives	21
	Option II: Moderately Paced Buildup to Navy Force Objectives	26
	Option III: Budget Constrained Program	28
	Option IV: Expanded Navy of Modified Force Mix	30
CHAPTER IV.	INDUSTRY AND NAVAL FORCE EXPANSION	37
	The U.S. Shipbuilding Industry	38
	The Options--Industry Implications	41
CHAPTER V.	OVERALL COST IMPLICATIONS OF NAVAL FORCE EXPANSION	45
	Other Cost Categories	45
	Costs of the Future Navy--Estimates for the Four Options.	49

CONTENTS (continued)

		Page
CHAPTER VI.	CURRENT ISSUES FOR THE CONGRESS.	61
	Basic Directions	61
	The Five-Year Shipbuilding Program	62
	Summary Assessment of the Five-Year Shipbuilding Plan	71
APPENDIX A.	OPTION I: NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1992 AND AUTHORIZED BY 1988	75
APPENDIX B.	OPTION II: NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	81
APPENDIX C.	OPTION III: REDUCED FORCE OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	89
APPENDIX D.	OPTION IV: MODIFIED FORCE MIX, EXPANDED FORCE LEVELS--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	97
APPENDIX E.	OPEN-OCEAN DESTROYER (DDGY)	105
APPENDIX F.	BASIS FOR BUDGET AUTHORITY ESTIMATES FOR OPTIONS I THROUGH IV . . .	111
GLOSSARY	. . . . .	115

TABLES

		Page
TABLE 1.	SHIPS INCLUDED IN NAVY FORCE LEVEL GOALS, BY TYPES	8
TABLE 2.	NAVY OBJECTIVE FOR SURFACE COMBATANT FORCE LEVEL	11
TABLE 3.	AMPHIBIOUS LIFT REQUIREMENTS	14
TABLE 4.	REPLENISHMENT SHIPS: OBJECTIVES AND CURRENT FORCE	14
TABLE 5.	NAVAL FORCE OBJECTIVES	16
TABLE 6.	OPTION I: RAPID BUILDUP TO NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1992 AND AUTHORIZED BY 1988	24
TABLE 7.	OPTION I: RAPID BUILDUP TO NAVY FORCE OBJECTIVES--ILLUSTRATIVE SHIPBUILDING PROGRAM	24
TABLE 8.	OPTION II: MODERATELY PACED BUILDUP TO NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992 . . .	27
TABLE 9.	OPTION II: MODERATELY PACED BUILDUP TO NAVY FORCE OBJECTIVES--ILLUSTRATIVE SHIPBUILDING PROGRAM	27
TABLE 10.	OPTION III: BUDGET CONSTRAINED PROGRAM--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	29
TABLE 11.	OPTION III: BUDGET CONSTRAINED PROGRAM--ILLUSTRATIVE SHIPBUILDING PROGRAM	29
TABLE 12.	OPTION IV: EXPANDED NAVY OF MODIFIED FORCE MIX--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	33

TABLES (Continued)

		Page
TABLE 13.	OPTION IV: EXPANDED NAVY OF MODIFIED FORCE MIX--ILLUSTRATIVE SHIPBUILDING PROGRAM	33
TABLE 14.	REAL VALUE OF SHIPMENTS PER EMPLOYEE, 1972-1976	39
TABLE 15.	MAJOR U.S. SHIPBUILDING YARDS, BY REGION, DECEMBER 1980	40
TABLE 16.	SUMMARY OF RESULTS OF IDASAS CALCULATION OF MINIMUM INDUSTRIAL REQUIREMENTS FOR FOUR OPTIONS	43
TABLE 17.	OPTION I: ESTIMATED BUDGET AUTHORITY FOR DEPARTMENT OF THE NAVY	52
TABLE 18.	OPTION II: ESTIMATED BUDGET AUTHORITY FOR DEPARTMENT OF THE NAVY	54
TABLE 19.	OPTION III: ESTIMATED BUDGET AUTHORITY FOR DEPARTMENT OF THE NAVY	56
TABLE 20.	OPTION IV: ESTIMATED BUDGET AUTHORITY FOR DEPARTMENT OF THE NAVY	58
TABLE 21.	ADMINISTRATION'S PROPOSED SHIPBUILDING PROGRAM FOR FISCAL YEARS 1983-1987	63

APPENDIX TABLES

		Page
TABLE A-1.	ILLUSTRATIVE SHIPBUILDING PROGRAM FOR OPTION I: NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1992 AND AUTHORIZED BY 1988	76
TABLE A-2.	ILLUSTRATIVE FORCE STRUCTURE FOR OPTION I: NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1992 AND AUTHORIZED BY 1988	78
TABLE B-1.	ILLUSTRATIVE SHIPBUILDING PROGRAM FOR OPTION II: NAVY FORCE OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	82
TABLE B-2.	ILLUSTRATIVE FORCE STRUCTURE FOR OPTION II: NAVAL FORCE OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	84
TABLE C-1.	ILLUSTRATIVE SHIPBUILDING PROGRAM FOR OPTION III: REDUCED FORCE LEVEL OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	90
TABLE C-2.	ILLUSTRATIVE FORCE STRUCTURE FOR OPTION III: REDUCED FORCE LEVEL OBJECTIVES--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	92
TABLE D-1.	ILLUSTRATIVE SHIPBUILDING PROGRAM FOR OPTION IV: MODIFIED FORCE MIX, EXPANDED FORCE LEVELS--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	98
TABLE D-2.	ILLUSTRATIVE FORCE STRUCTURE FOR OPTION IV: MODIFIED FORCE MIX, EXPANDED FORCE LEVELS--SHIPS IN FLEET BY 1996 AND AUTHORIZED BY 1992	100

APPENDIX TABLES (Continued)

		Page
TABLE E-1.	CHARACTERISTICS OF ALTERNATIVE SHIP TYPES	108
TABLE E-2.	DERIVATION OF DDGY DISPLACEMENT AND COST USING FFG-7 AS BASELINE	110

FIGURES

FIGURE 1.	SHIPBUILDING AND CONVERSION, NAVY BUDGET LEVELS SINCE 1975 AND PROJECTED TO 1995 UNDER FOUR SHIPBUILDING PROGRAM OPTIONS	22
FIGURE 2.	NAVY BUDGET AUTHORITY SINCE 1975 AND PROJECTED TO 1995 UNDER FOUR PROGRAM OPTIONS	50
FIGURE E-1.	FOUR ALTERNATIVE SHIP TYPES	109

SUMMARY

Once the indisputably dominant power at sea, the United States has seen this dominance erode over the past two decades as a result of steady growth in Soviet naval capabilities and declining force levels in the U.S. Navy. Between 1970 and 1980 the total number of ships in the U.S. Navy fell from 847 to 538 and uniformed personnel strength declined from 675,000 to about 525,000. Although the remaining ships are newer and more capable than those retired, the Navy now has substantially fewer ships with which to sustain its peacetime commitments or to conduct wartime operations. One result has been an operational pace in recent years nearly unprecedented in peacetime. The Chief of Naval Operations recently testified that "the Navy has been at virtually a wartime operating tempo since the beginning of the Vietnam conflict and has never stood down."

BUILDING THE FUTURE NAVY--STRATEGY CONSIDERATIONS

The Administration has announced plans to increase substantially U.S. naval forces, which are deemed to be inadequate. The specifics of these plans are based upon a maritime offensive strategy that emphasizes strikes against enemy forces and their supporting base structure, including strikes in enemy waters against its home territory. Carrier battle groups would be the primary instrument of such offensive action. The Navy believes that the most efficient way to maintain control of the seas is to destroy hostile forces capable of challenging that control. The Navy further holds that the very existence of such offensive forces would force the Soviet Union into a defensive, reactive position, allowing the United States to capitalize on Soviet geographic disadvantages and compelling the Soviet Union to concentrate its naval forces close to its homeland where they would pose less of a threat to U.S. sea lines of communication.

It is very likely that this strategy would evoke a strong Soviet response against the attacking battle groups, since it would involve direct assaults against Soviet territory. In the Navy's view, this dictates a requirement for highly capable--and therefore very expensive--weapons systems to defend against

intense Soviet attacks. Critics of this position, however, view the strategy as fundamentally unworkable and likely to provoke Soviet use of nuclear weapons against the battle groups. In this view, even the most sophisticated and expensive weapons would probably not be effective in protecting the battle groups against the intensive resistance that would be encountered in Soviet waters. A more realistic approach, in this view, might be to build a Navy capable of controlling and defending large areas of the ocean, including vital sea lanes and Third World areas, against a widely distributed Soviet threat. This approach would require a large fleet, but one with less need for the highly sophisticated weapons required for an offensive strategy.

BUILDING THE FUTURE NAVY--FORCE OBJECTIVES

The Navy's Force Objectives

Based on its strategy and its view of priorities, the Navy has developed specific objectives for future naval force expansion. The Navy believes that the fleet outlined in Summary Tables 1 and 2 is the minimum force needed to protect U.S. interests at sea, given currently foreseen conditions. This fleet would number over 600 ships (including the strategic force of ballistic missile submarines) of the types that support the Navy's requirements for accomplishing its wartime missions as the Navy currently perceives them.

The fleet envisioned by current Navy planners features 15 deployable aircraft carriers, with their associated air wings and battle group escorts, which would form the primary offensive strike forces. The carrier battle groups would be supplemented by four surface action groups (SAGs), which are naval combat groups not containing aircraft carriers. SAGs would probably be centered upon the four battleships that the Administration plans to reactivate.

Lift capability for amphibious forces--that is, forces capable of making a forcible invasion from the sea--would be increased about 50 percent to provide a capability to land a Marine Amphibious Brigade, or MAB (15,500 troops), in addition to the current ability to land a Marine Amphibious Force, or MAF (32,500 troops). The Navy has increased its force level goal for attack submarines from 90 to 100, and intends to replace its 25 old minesweepers with 31 new ships.

SUMMARY TABLE 1. NAVY FORCE OBJECTIVES

Forces	Number
Carrier Battle Groups	15
Surface Action Groups	4
Amphibious Lift	1 MAF a/ + 1 MAB b/
Underway Replenishment Groups	10
Nuclear Attack Submarines	100

a/ Marine Amphibious Force - 32,500 troops.

b/ Marine Amphibious Brigade - 15,500 troops.

SUMMARY TABLE 2. SHIP LEVELS FOR GENERAL PURPOSE FORCES

Ship Type	Number of Ships	
	Current Force	Objective
Combatants		
Aircraft Carriers	12	15
Battleships	0	4
Battle Group Escorts	112	137
Frigates	81	101
Attack Submarines	91	100
Small Combatants	5	--
Total Combatants	301	357
Other Ships		
Amphibious Ships	65	75
Mine Warfare Ships	25	31
Replenishment Ships	53	69
Material Support Ships	26	27
Fleet Support Ships	30	33
Total, Other Types	199	235
Ballistic Missile Submarines (SSBNs)	35	Unstated
Total, All Ships	535	592 + SSBNs

Finally, the underway replenishment force, which is vital for sustained operations at sea, would be built up to support the larger combat fleet. The number of support ships, including destroyer tenders and submarine tenders, which back up the fleet also would be appreciable.

Options I and II, among the program alternatives examined in this report, meet these Navy force objectives.

Alternative Force Objectives

There are many alternatives to the force objectives presented above. Very generally, these can be categorized as two types:

- Those that procure a different number of the same kinds of ships as proposed by the Navy; and
- Those that procure a different mix of ships.

This report examines an alternative of each type.

Alternatives of the first kind might logically derive from an assessment that the Navy's strategy and the specific ship types planned to implement that strategy are correct, but that the numbers of ships recommended are either unattainable within feasible budgets or are unnecessary for the levels of conflict anticipated in the future. This kind of alternative is examined as Option III.

Alternatives of the second kind--those that procure a different mix of ships--might derive from a different view of naval strategy or from a different view of how best to implement the Navy's strategy. This kind of alternative is examined in Option IV. This option would introduce three different ship types not currently included in Navy shipbuilding plans. It suggests directions in which ship design might proceed if it was decided to place more emphasis on distributed-force, open-ocean operations as opposed to concentrated offensive strikes.

BUILDING THE FUTURE NAVY--ALTERNATIVE APPROACHES

This report presents four alternative shipbuilding programs. These programs illustrate the budget and force structure implications of various approaches to future Navy shipbuilding.

Of the four options examined, two, Options I and II, would achieve the number and types of ships recommended by the Navy. Option I would reach these goals by 1992, which means the ships would have to be authorized no later than 1988. This is probably the shortest period of time in which the Navy's goals could be reached. Congress could decide to accomplish the same goals, but over a longer time. Hence, Option II would extend the authorization period from six to ten years, with authorizations extending through fiscal year 1992 and force goals substantially achieved by 1996.

Option III would be a lower cost alternative producing fewer ships, but one in which the kinds of ships procured would all be of the same types contained in current Navy plans. It would result in a substantially smaller fleet than Options I and II. Option IV would introduce some ship types not contained in current Navy plans. It would attain numerical force levels comparable to the Navy goals at a lower cost than Options I or II.

Appendixes A through D present details of the annual shipbuilding programs for each of these options and the resulting year-by-year force structure. Summary Table 3 provides a summary of the results.

Option I: Rapid Buildup to Navy Force Objectives

Option I would achieve the Navy's force goals in ten years, necessitating that authorizations be accomplished in six years since ships are generally not delivered until at least four years after authorization. This option would require authorization of 176 ships over the next six years at a total cost of $119 billion. (All costs in this report are in fiscal year 1983 dollars). This option is clearly the most desirable in terms of achieving the Navy's long-run objectives. It would result in a fleet structured to support the Navy's offensive strategy and would do so in a shorter time than any of the other options. Under Option I, the fleet would grow to 657 ships by the 1990s, including 15 deployable carrier battle groups.

This growth would, however, require an immediate and drastic increase in the Shipbuilding and Conversion, Navy (SCN) budget. SCN budget requirements for Option I are estimated to average about $25 billion annually over the next six years, or about 2 1/2 times the fiscal year 1982 authorization and 34 percent above the Administration's budget request for 1983. This $25 billion would

SUMMARY TABLE 3. SUMMARY OF SHIPBUILDING PROGRAM OPTIONS (Costs in billions of fiscal year 1983 dollars)

	Option I	Option II	Option III	Option IV
Timing				
Year goals met	1992	1996	1996	1996
Authorization period (in years)	6 a/	10	10	10
Ships				
Current force (End of 1981)	535	535	535	535
Retirements	152 a/	240	240	240
Now building or authorized	98	98	98	98
New authority	176 a/	230	146	231
Fleet total	657 a/	623	539	624
Program Requirements				
Total authorizations, ships	176 a/	230	146	231
Average annual number of ships	29.3	23.0	14.6	23.1
Total new construction cost	119 a/	170	97.0	121
Average annual new construction cost	19.8	17.0	9.7	12.1
Average annual total, Shipbuilding and Construction, Navy	24.8	21.3	12.1	15.1

a/ Option I is a six-year authorization program through fiscal year 1988, with ships assumed to be substantially all delivered by 1992. For Option I, therefore, the figures for retirements and fleet totals are through 1992 and authorizations are through fiscal year 1988. In all other options, the program period is four years longer, with authorizations extending through 1992 and the figures for retirements and fleet totals through 1996.

be higher than the amount required for new ships alone because the SCN budget contains funds for purposes other than construction of new ships, including conversions of existing ships, outfitting, post delivery costs, cost growth, and funds to cover unforeseen escalation. Over the past ten years, these items have averaged about 20 percent of the total SCN budget. In this report, therefore, it is assumed that funds required for new ships represent about 80 percent of the total SCN budget in any given year.

Option II: Slower Buildup to Navy Force Objectives

Option II would achieve the same force goals as Option I but would take four more years to attain them. Authorizations for Option II would be distributed over a ten-year period ending in 1992, with deliveries assumed to be substantially complete by 1996. A total of 230 ships would be authorized over the ten-year period in this option at a total cost of $170 billion. More ships would have to be constructed than in Option I because more older ships would be retired during the longer duration of Option II. This would translate into an average annual expenditure of $17.0 billion for new ship construction or (assuming an 80 percent share of SCN for new construction) a total average SCN budget of $21.3 billion per year for ten years. This would be a lower annual average expenditure than Option I but still over two times the SCN budget for fiscal year 1982 and about 16 percent more than the Administration's request for 1983.

It should be recognized that, when viewed over a longer time frame, Options I and II are in fact the same since both eventually attain the same force goals. They are treated here as two options and viewed over different time periods in order to investigate the effects of timing and scheduling on the budgetary requirements for a naval force expansion program. Although the long-term budgetary requirements for these two options should be about the same, the nearer-term budget implications would be substantially different.

Option III: Budget Constrained Program

Option III illustrates the force levels that might result if the Navy continued to procure the same types of ships as currently planned, but with the shipbuilding budget constrained to more modest growth. In Option III, it was assumed that the budget for new construction was limited to a level of about $10 billion per year (or $12.5 billion for the total SCN budget).

92-181 O - 82 - 2

The Navy resulting from Option III, that is a Navy constrained to modestly increased budget levels and currently programmed ship types, would contain about 540 ships in the mid-1990s, about the same number as the current force. The mix of ship types in Option III would correspond to those in the Navy's plans but at the lower numbers dictated by constrained budgets. The resulting fleet would include 12 carrier battle groups instead of 15 and lower force levels in most other categories--levels that would closely resemble the force goals of the previous Administration.

Option IV: Expanded Navy of Modified Force Mix

Option IV would provide the higher numerical force levels of Options I and II but at lower cost. It would include a somewhat different mix of combatant ships than those in current Navy plans--a mix motivated by an emphasis on open-ocean, distributed-force operations as opposed to emphasis on concentrated offensive strikes.

Distributed-force, open-ocean operations require ships that can surveil large areas and can engage enemy units--surface, subsurface, or airborne--at long range. Ships for these operations, therefore, should have helicopters or vertical/short take-off and landing (V/STOL) aircraft for long-range surveillance and targeting, towed-array sonar systems for long-range submarine detection, cruise missiles, and long-range anti-air warfare (AAW) capability. Option IV would include a total of 73 new surface combatants of types well-suited to distributed-force operations but not currently included in Navy construction plans. These include 12 guided missile aviation cruisers (CGV) and 61 guided missile destroyers (DDGY).

The CGVs would be equipped with a balanced suite of ship-mounted anti-air, antisubmarine, and antisurface weapons, including vertically launched missiles. Their principal feature, however, would be a flight deck and support facilities for eight to 12 V/STOL aircraft or helicopters--an air group large enough to provide a sustained airborne surveillance capability for a naval force not containing an aircraft carrier.

The DDGY is a general purpose surface combatant also equipped with a balanced suite of anti-air, antisubmarine, and antisurface weapons. It would have a modern (but non-AEGIS) AAW system, a towed-array sonar, and vertically launched missiles. Its flight

deck and aviation support facilities would be adequate for two helicopters (or future V/STOL aircraft) for extended surveillance, targeting, and attack. These ships, with their ability to provide a naval presence and force over a large ocean area, could be used in a wide variety of missions from offensive strikes to patrol and presence operations.

Option IV would also call for resuming construction of nonnuclear attack submarines of an upgraded and modernized type to supplement the nuclear submarine force. These are suggested not because they are more capable on a ship-to-ship basis than nuclear submarines but because of their cost advantage. Some important submarine missions, such as barrier patrols, could be performed adequately by nonnuclear submarines, and some argue that diesel-electric submarines, because they are very quiet and difficult to detect when operating on battery power, would actually be more effective than nuclear submarines for some missions. The approximately three-to-one life-cycle cost advantage of diesel-electric submarines over current nuclear attack submarines would provide a larger submarine force, and, therefore, the flexibility inherent to more units, for a given investment. Thus, as a supplement to the nuclear force, diesel-electric submarines could be assigned to missions for which they are suited and free nuclear submarines for more demanding tasks.

Option IV would procure 231 ships over ten authorizing years at a total cost of $121 billion. This would correspond to an average annual program of $12.1 billion for new construction or about a $15.1 billion average annual total SCN budget requirement. This budgetary requirement would fall between the force sustaining investment level of Option III and the sharply increased budget levels of Options I and II.

INDUSTRY AND NAVAL FORCE EXPANSION

The four options considered above were analyzed for their effect on the U.S. shipbuilding industrial base, with the aid of a computer model called the Institute for Defense Analyses Ship Allocation System (IDASAS). The results indicated that all of the options were well within the capacity of the current shipbuilding industry, assuming, of course, some growth in shipyard employment levels.

The major problem in the shipbuilding industry at present is not the physical capacity to respond to any anticipated Navy

buildup, but rather one of staying in business in the face of a disappearing demand from commercial ship operators. Compared to 1972 and 1973, when U.S. shipbuilders received new orders for 48 and 43 merchant ships, respectively, of 1,000 gross tons and over, only seven vessels were ordered in 1980 and six in 1981. The government, therefore, has become almost the sole remaining customer for this industry and government actions are likely to be key determinants of the size and capabilities of the industry in the future.

TOTAL NAVY BUDGET UNDER FOUR OPTIONS

The costs outlined for each of the above options and explained in more detail in the appendixes are only those in the Shipbuilding and Conversion, Navy (SCN) budget. Additional costs--including funds for such things as operations, maintenance, manpower, weapons, and aircraft procurement--are interrelated and spread across a wide spectrum of activities. Calculating them is a complex and laborious process. The Congressional Budget Office (CBO), however, has developed a computer model, called the Defense Resources Model (DRM), that automates this process and enables CBO to compute relatively rapid estimates of the overall budgetary effects of changes in procurement plans.

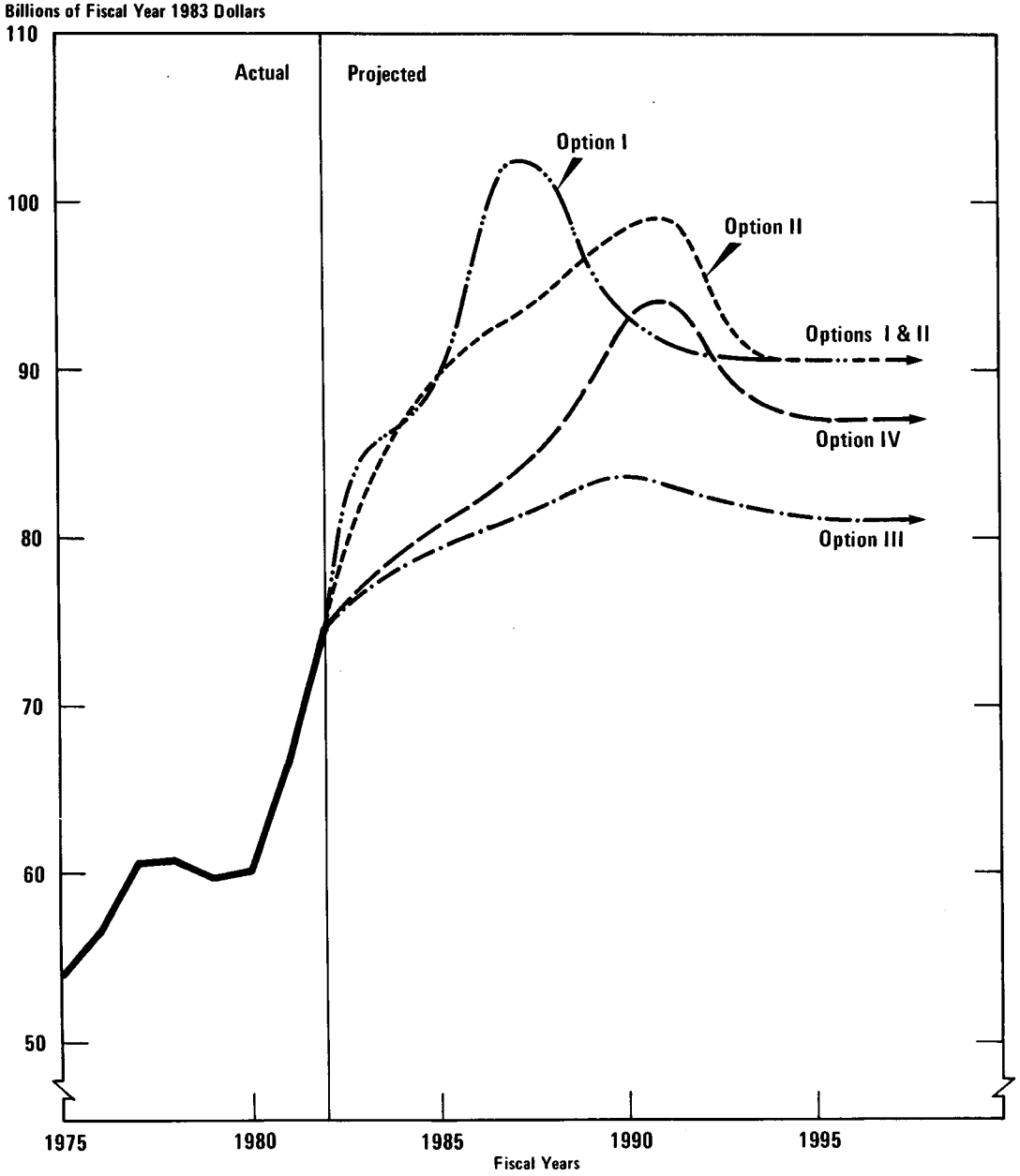
Projections of the Navy's overall budget requirements under each of the four options, as estimated with the help of the DRM, are shown in the Summary Figure. The required budget authority rises sharply to a peak in order to effect a rapid force buildup and then settles back to a somewhat lower sustaining budget level. This effect is most pronounced for Options I and II, with Option I--the accelerated buildup--peaking several years before Option II. Option IV--the 600-ship option with a different force mix--shows a similar trend but at a somewhat lower level. Option III--which basically maintains current force levels--also requires some growth in real budget authority but at a much more modest level. Tables showing these estimates in detail are provided in Chapter V.

THE ADMINISTRATION'S FIVE-YEAR SHIPBUILDING PLAN

The five-year shipbuilding program proposed by the Administration in the fiscal year 1983 budget is shown in Summary Table 4. It proposes authorization of 133 new ships and 16 conversions, service life extension program (SLEP) overhauls, and

Summary Figure.

Navy Budget Authority Since 1975 and Projected to 1995 Under Four Program Options



SUMMARY TABLE 4. ADMINISTRATION'S PROPOSAL SHIPBUILDING PROGRAM FOR FISCAL YEARS 1983-1987

Type of Ship	1982 a/	1983	1984	1985	1986	1987	1983-1987 Total
Trident (Ballistic Missile Submarine)	--	2	1	1	1	1	6
SSN-688 (Attack Submarine)	2	2	3	4	4	4	17
CVN (Aircraft Carrier-Nuclear)	--	2	--	--	--	--	2
CV (Aircraft Carrier) SLEP b/	--	1	--	1	--	1	3
CG-47 (Guided Missile Cruiser)	3	3	3	3	4	4	17
CG-42 (Nuclear Guided Missile Cruiser)	--	--	--	--	--	1	1
DDG-51 (Guided Missile Destroyer)	--	--	--	1	--	3	4
DD (Destroyer)	--	--	--	--	2	1	3
BB (Battleship) Reactivation	1	1	1	1	--	--	3
FFG-7 (Guided Missile Frigate)	3	2	2	2	3	3	12
MCM (Mine Countermeasure Ship)	1	4	4	5	--	--	13
MSH (Mine Countermeasure Ship)	--	--	1	--	5	5	11
LSD-41 (Landing Ship Dock)	1	1	1	2	2	2	8
LHD-1 (Amphibious Ship)	--	--	1	--	--	1	2
AOE (Multipurpose Stores Ship)	--	--	--	1	1	2	4
AE (Ammunition Ship)	--	--	--	1	2	1	4
ARS (Salvage Ship)	2	1	1	--	--	--	2
AD (Destroyer Tender)	--	--	--	--	1	1	2
T-AO (Oiler)	1	1	3	4	4	6	18
T-AGS (Ballistic Missile Submarine Support Ship) Conversion	--	--	--	2	--	--	2
T-AK (Cargo Ship) Conversion	--	--	--	1	--	--	1
T-ARC (Cable Ship)	--	--	--	--	1	--	1
T-AGM (Range Instrumentation Ship) Conversion	--	--	--	--	1	--	1
T-AGOS/AGOS (Surveillance Towed Array Sensor System)	4	--	1	--	2	3	6
T-AKRX (SL-7) Conversion c/	4	4	--	--	--	--	4
T-AFS (Stores Ship) Conversion	2	--	--	--	--	--	--
T-AH (Hospital Ship) Conversion	--	1	1	1	--	--	2
New Construction Ships	17	18	21	24	32	38	133
Conversions/SLEPs/ Reactivations	7	7	2	2	1	1	16

SOURCE: Department of Defense

NOTE: All ships, conversions, and service life extensions are proposed to be authorized in the year listed. They will not enter the fleet until later years.

a/ Included to provide comparison with the Administration's program.

b/ SLEP = Service Life Extension Program.

c/ Acquisition of eight T-AKRXs will be completed in fiscal year 1982.

reactivations in fiscal years 1983 through 1987. Although this five-year program, estimated to cost over $80 billion in fiscal year 1983 dollars, is more ambitious than previous programs submitted to the Congress over the past few years, it would not accomplish all of the Navy's goals. It is, perhaps, closest to Option II of this report, but does not contain sufficient ships, particularly surface combatants, to reach many of the Navy goals for specific ship types. In addition, this plan--as has been the case with so many previous shipbuilding plans--places procurement of most of its ships in the later out-years. Over half of the 133 ships of this five-year plan appear in the last two years. Achievement of the Navy's force level goals, therefore, would require adhering to at least the authorization levels contained in the out-year building plans and continued high levels of construction in the years beyond fiscal year 1987.

BUILDING THE FUTURE NAVY--DIFFICULT CHOICES

Consideration of the four program options discussed above suggests some important conclusions regarding the Navy's current force expansion plans. Options I and II indicate that building up to the force levels proposed by the Navy with the kinds of ships currently programmed, could not be accomplished without increasing shipbuilding and total Navy budgets to levels well above recent peacetime practice. Option III indicates that, if the Navy continued to procure the kinds of ships currently programmed, some real budget growth would be required even to maintain current force levels. Attainment of the currently stated force goals within the bounds of even fairly vigorous real growth in budget authority might not be achieved unless successful efforts could be mounted to develop less costly warships, such as those suggested in Option IV.

Not only is the Navy's shipbuilding program very expensive, but it is predicated upon an offensive strategy that is, in the opinion of some observers, dangerously provocative in a nuclear-armed world and very hazardous to U.S. carrier forces even if a nuclear exchange is avoided. Critics of the Navy's strategy argue that the U.S. should turn away from the current emphasis on offensive strikes into Soviet waters--strikes which, they feel, would be likely to result in more damage to irreplaceable carrier battle groups than to Soviet forces--and emphasize instead the development of a Navy with distributed offensive capability, able to control large areas of the ocean, including vital sea lanes and strategically important areas in the Third World. Such

a Navy, it is argued, would be better able to protect U.S. interests across a wider spectrum of future contingencies.

The Congress, therefore, must not only consider the budgetary implications of future shipbuilding programs but also the wisdom of the naval strategy assumptions upon which those programs are based.

CHAPTER I. INTRODUCTION

One of the most widely known and discussed defense goals established by the Administration is naval force expansion, or the "600-ship Navy." Convinced that currently operational naval forces are inadequate to support fully existing U.S. worldwide commitments and possible future contingencies, the Administration has proposed a substantial buildup of naval forces. Although the proposed expansion would be a many-faceted program involving more than just increasing the number of ships in the Navy, the term "600-ship Navy" has become the commonly used catchword for describing this goal.

A gross ship total, such as 600 ships, can be justifiably criticized as an inadequate indicator of naval strength. It says nothing about ship capabilities or such other key factors as aircraft, manpower, training, logistics, maintenance, modernization, and a host of other items vital to the effectiveness of a modern Navy. Despite this, the term 600-ship Navy does serve as useful rhetorical shorthand in discussing the proposed buildup and it is a convenient index with which to measure a balanced naval force expansion.

This proposed naval program is a very large undertaking. It will require a substantial increase in budgetary authority for the Navy which will have to be sustained over a period of many years. Decisions made now in shaping such a program will influence the structure and capabilities of U.S. naval forces well into the next century. This raises many important issues for the Congress, including the following:

- What is the rationale for a naval force buildup?
- What forms can such a buildup take?
- How long will it take?
- What are the budgetary implications of the proposed buildup?

This report examines these issues. In particular, it analyzes the ship-related aspects of the proposed naval expansion with regard to procurement costs and schedules, effects on the shipbuilding industry, naval manpower, and operation and maintenance (O & M) requirements.

The importance of these issues is highlighted not only by the long-term national security implications cited above, but by the sheer magnitude of the expenditures involved. The Congressional Budget Office (CBO) estimates that a program to build the fleet of ships recommended by the Navy would cost at least $170 billion in ship procurement alone over a period of ten years. Assuming an 80 percent share for new construction in the Navy's shipbuilding and conversion (SCN) budget, this would imply an average annual budget requirement of $21.3 billion for SCN, more than twice the amount authorized in fiscal year 1982. Moreover, a Navy buildup would involve additional procurement in other categories, such as aircraft and weapons, and additional costs for manpower and operations in sustaining a larger fleet. Indeed, the total Navy budget would have to grow to a level nearly 40 percent above that for fiscal year 1982 (in fiscal year 1983 dollars) to accomplish the buildup, and would then settle to a level about 25 percent higher than fiscal year 1982 to sustain the larger fleet.

Chapter II of this report describes the Navy's plan for expanding naval force levels and presents the rationale underlying this expansion. Chapter III presents four options for future Navy shipbuilding, using various numbers and mixes of ships. These options are defined in more detail in the appendixes. Chapter IV discusses the industrial base necessary to support building ships for an expanded Navy. Chapter V analyzes the aggregate costs of naval force expansion and projects total Department of the Navy budgetary requirements under each of the four options. Chapter VI discusses the Administration's proposed five-year shipbuilding program for fiscal years 1983-1987.

All cost figures in this report, unless otherwise noted, are in terms of fiscal year 1983 dollars.